p1029: Combine Like Terms (v2)

Example

Combine like terms.
$$6x^2 - 4x^2 + 8x - 2x^2 - 9 + 4 + 5x - 1 - 8x + 3x^2$$

Answer

Combine the quadratic terms.

$$6x^2 - 4x^2 - 2x^2 + 3x^2 \equiv 3x^2$$

Combine the linear terms.

$$8x + 5x - 8x \equiv 5x$$

Combine the constant terms.

$$-9 + 4 - 1 \equiv -6$$

The final result:

$$3x^2 + 5x - 6$$

Question 1

Combine like terms.
$$-4x^2 - x^2 + 5x - 2 + 4x^2 + 9 - 7x + 8 - 3x + 6$$

$$-x^2 - 5x + 21$$

Question 2

Combine like terms.

$$4 + 6x - 9x^2 - 8 - 2x^2 - 6x - 5 + 8x + 3x^2 - 4x$$

$$-8x^2 + 4x - 9$$

Question 3

Combine like terms.

$$-4x^2 + 6x + 4 - 7 - 2 + 9x - 9x - 5x^2 + 7x^2 + 3$$

$$-2x^2 + 6x - 2$$

Question 4

Combine like terms.

$$2x^2 - 1 + 6 + x + 5 - 5x^2 + 9x - 9x^2 + 8x - 8$$

$$-12x^2 + 18x + 2$$